Applicants : Robert L. Fine et al.
U.S. Serial No. : 10/587,606
Filed : November 13, 2006
Page : 7 of 13 of Amendment

## REMARKS

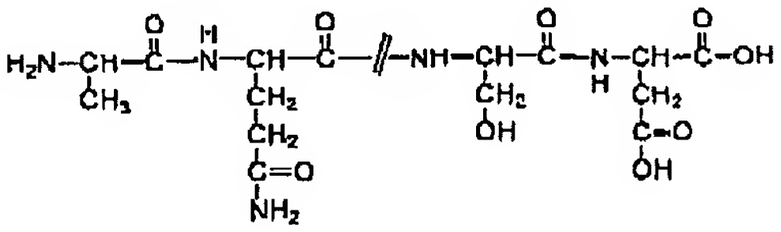
Claims 1, 3-6, 9-18, 31, 36, 41 and 42 are pending in the subject application. Applicants have hereinabove amended claims 1, 5, 9, 12, 14, 17, 31, 41 and 42. Support for the amendments to claim 1 can be found in the specification as originally filed at page 11, lines 13-19. Support for the amendments to claim 5 can be found in the specification as originally filed at page 11, lines 27-31. Claims 31, 41, and 42 which were previously dependent on claims 1, 9 and 14, respectively, have been amended to incorporate the elements recited in claims 1, 9 and 14, respectively. Further support for the amendments to claims 31, 41 and 42 can be found in the specification as originally filed at page 16, lines 4-6 and 27-29. Claims 9, 12, 14 and 17 have been amended for clarity. Accordingly, applicants respectfully request that this Amendment be entered.

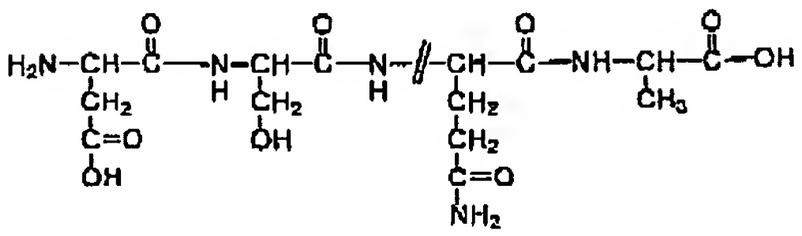
## Summary of January 7, 2010 Telephone Interview With Examiner

Applicants thank Examiner Lei Yao, Ph.D. for the courtesy extended during a January 7, 2010 telephone interview with inventor Robert L. Fine, assignee's representatives Cindy Lang and Peter Golikov, and the undersigned. During the interview the undersigned, on behalf of applicants, pointed out the differences between the claimed polypeptide and the prior art. In particular, applicants explained that the "right portion" of the polypeptide sequence shown in SEQ ID NO:3, i.e. the portion to the right of the [glycine] in the representation of SEQ ID NO:3 was a chemically different structure from the "left portion", i.e. the portion to the left of the [glycine]

in the representation of SEQ ID NO:3. As an aid to pointing out the differences, applicants provided Examiner Yao with the following schematic, the top structure of which is based on residues 353, 354, 392 and 393 of the p53 (i.e. A, Q, S, and D):

A Q S D



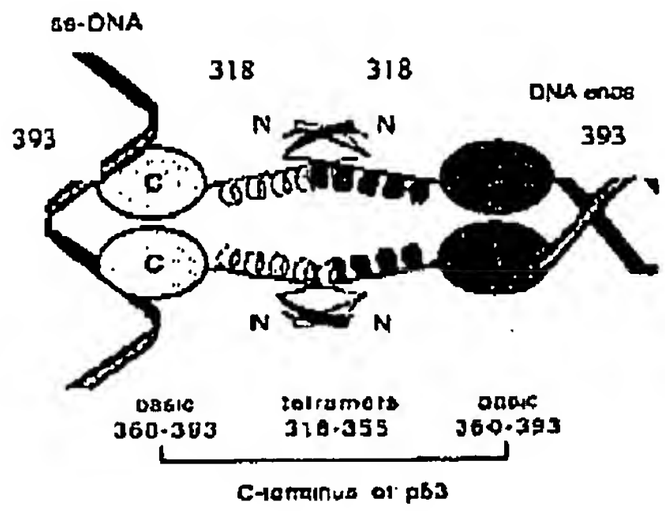


D S Q A

Applicants further pointed out that the two portions were different chemical structures. Applicants noted that the molecule represented by the representation "DSQA" is <u>not</u> the molecule represented by the representation "AQSD" because both representations must be read in an N to C direction. In regard to this, applicants directed the Examiner's attention to 37 CFR §1.822(d)(3): "<u>An amino acid sequence shall be presented in the amino to carboxy direction, from left to right</u>, and the amino and carboxy groups shall not be presented in the sequence" (emphasis added). The Examiner agreed with applicants that the two portions of the molecule on either side of the [glycine] in claim 1 are different chemical structures.

Applicants also noted, and the Examiner agreed, that taking fragments of p53, and covalently linking them together, as suggested by the Examiner in the October 27, 2009 Final Office Action, would not result in the claimed invention because the claimed polypeptide comprises a portion which is not a fragment of p53.

The Examiner further acknowledged that the reference Reed et al. may be inappropriately applied in the outstanding obviousness rejection, which rejection would be withdrawn upon the filing of this response withdrawn. Fig. 4 of Reed et al. with applicants' annotation is repeated herein for convenience:




The Examiner agreed that one could not join the two N-termini shown juxtaposed in the top half of Fig. 4 of Reed et al. using a peptide bond (directly or via or a glycine), and further agreed that even if one did join the two N-termini one would still not have made applicants' invention as claimed. Applicants noted that the 393-318 : 318-393 orientation shown in Fig. 4 of Reed et al. did not correspond to SEQ ID NO:3 the

first portion of which is 353-393, and the second portion of which is a chemical structure not disclosed in Reed et al.

Applicants pointed out, with regard to the Examiner's assertion in the October 27, 2009 Final Office Action that the transitional term "comprising" in applicants' claim 1 means it reads on Reed et al., that none of the prior art discloses a polypeptide that comprises SEQ ID NO:3, not least because the right hand portion of SEQ ID NO:3 is not disclosed in any combination of the cited art.

Finally, applicants noted that Hoffman et al. in combination with Reed et al. does not cure the failure of the prior art to render obvious the invention as claimed.

**Claims Rejected Under 35 U.S.C. §103(a)**

Claims 1, 3, 9, 10, 14 and 15

In the October 27, 2009 Final Office Action, the Examiner asserted that claims 1, 3, 9, 10, 14 and 15 were obvious over Reed et al. (PNAS 92:9455-9459, (1995)) in view of Hoffman et al. (U.S. Patent No. 5,545,727, issued 1996) "as evidenced by [a] sequence search result." The Examiner asserted, *inter alia*, that Reed et al. teach that the functional domain of p53 forms dimers or a stable tetramer, and that the C-terminal of p53 contains amino acids 318-393 of human p53. The Examiner stated, inter alia, that, based on Reed et al. one skilled in the art "would take fragments of the p53 protein to covalently link them together for the purpose of medical or therapeutic use."

*Applicants' Response*

In response, applicants respectfully traverse the Examiner's rejection. However, further to the January 7, 2010 telephone interview, applicants understand that the Examiner will reconsider and withdraw this rejection.

Claims 1, 4-6, 9, 11-14, 16-18, 31, 36, 41 and 42

The Examiner asserted that claims 1, 4-6, 9, 11-14, 16-18, 31, 36, 41 and 42 were obvious over Reed et al. (PNAS 92:9455-9459, (1995)) in view of Hoffman et al. (U.S. Patent No. 5,545,727, issued 1996) "as evidenced by [a] sequence search result as applied to claims 1, 7-9, 14" and further in view of Pincus, M. (WO2003/105880, filed March 2003, claiming priority to March 2002, published December 2003). The Examiner stated, inter alia, that "it would be obvious to replace the fragment of p53 in the method of Pincus with the fragment repeat(s) disclosed by Reed for treating a cancer with expected result[s]."

*Applicants' Response*

In response, applicants respectfully traverse the Examiner's rejection. However, further to the January 7, 2010 telephone interview, applicants understand that the Examiner will reconsider and withdraw this rejection.

Moreover, applicants note that Pincus et al. disclose using a fragment of p53 which is residues 12-26 of p53. Pincus notes that this fragment may be useful in treating cancer because of its ability to bind to MDM-2, a regulatory protein (see Pincus, page 2, lines 5-8). However, there is no suggestion in Pincus, nor in the combined cited art, that the polypeptide

recited in the claims could bind MDM-2 and therefore reasonably be expected to function in place of the residues 12-26 of p53. Thus, contrary to the Examiner's assertion, there is no predictable result from using the claimed polypeptide in the method discussed by Pincus.

Pincus et al. in combination with Reed et al. and Hoffman et al. do not cure the failure of the combination to teach, suggest or render obvious the claimed sequence. Accordingly, applicants respectfully request that the Examiner reconsider and withdraw this rejection.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorneys invite the Examiner to telephone them at the number provided below.

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A $110.00 fee excess claims fee for which authorization is hereby given to charge Deposit Account No. 03-3125 is deemed necessary in connection with the filing of this Amendment. No other fee is deemed necessary. If any additional fee is required, authorization is hereby given to charge the amount of such fee to Deposit Account No. 03-3125.

Respectfully submitted,

I hereby certify that this correspondence is being transmitted by facsimile this date:
1-571-273-8300
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Gary J. Gershik 1/21/10
Gary J. Gershik Date
Reg. No. 39,992

John P. White
Registration No. 28,678
Gary J. Gershik
Registration No. 39,992
Attorneys for Applicants
Cooper & Dunham LLP
30 Rockefeller Plaza,
20th Floor
New York, New York 10112
(212) 278-0400